

1 Replacement of pavement markings that prematurely deteriorated, failed to adhere to the  
 2 pavement, lacked reflectorization or were otherwise unsatisfactory during the life of the  
 3 project or during the 12 month observation period as determined by the Engineer will be at no  
 4 cost to the Department.

5 Payment for Paint Pavement Marking Lines required to winterize the project will be made in  
 6 accordance with Article 1205-10 except that no payment will be made on resurfacing projects  
 7 where paving is completed more than 30 days before the written notification by the  
 8 Department that winterization is required.

9 Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Paint Pavement Marking Lines, __"	Linear Foot
Thermoplastic Pavement Marking Lines, __", __ mils	Linear Foot
Polyurea Pavement Marking Lines; __"	Linear Foot
Cold Applied Plastic Pavement Marking Lines, Type ____ (__)	Linear Foot
Heated-In-Place Thermoplastic Pavement Marking Lines, __", __ mils	Linear Foot
Paint Pavement Marking Symbols	Each
Thermoplastic Pavement Marking Symbols, __ mils:	Each
Cold Applied Plastic Pavement Marking Symbols, Type ____	Each
Heated-In-Place Thermoplastic Pavement Marking Symbols, __ mils	Each
Paint Pavement Marking Characters	Each
Thermoplastic Pavement Marking Characters, __ mils	Each
Cold Applied Plastic Pavement Marking Characters, Type ____	Each
Heated-In-Place Pavement Marking Characters __ mils	Each
Removal of Pavement Marking Lines, __"	Linear Foot
Removal of Pavement Marking Symbols & Characters	Each
Curing Compound Removal, Lines	Linear Foot
Curing Compound Removal, Symbols & Characters	Each

## 10 SECTION 1250

### 11 PAVEMENT MARKERS GENERAL REQUIREMENTS

#### 12 1250-1 DESCRIPTION

13 Furnish and place pavement markers in accordance with the contract.

#### 14 1250-2 MATERIALS

##### 15 (A) General

16 Refer to Division 10.

<b>Item</b>	<b>Section</b>
Pavement Markers	1086

##### 17 (B) Material Qualifications

18 Use pavement markers that are on the NCDOT Approved Products List.

## Section 1250

### (C) Historical Performance

Historical performance of the pavement markers will be used in determining future use of the pavement markers by the Department, even if the pavement markers have been traffic qualified. Poor performance of pavement markers at any site, whether or not related to a specific contract may be grounds for nonacceptance of a product on any project under contract.

## 1250-3 CONSTRUCTION METHODS

### (A) Weather Limitations

Do not install pavement markers or replacement reflectors if moisture tests performed on the pavement indicate the presence of moisture on the pavement surface or on the pavement marker. Install all pavement marker adhesives as required by the manufacturer's specifications for weather and temperature limitations.

### (B) Preparing for installation

Ensure that the pavement, pavement markers and replacement lens are free of dirt, dust, oil, grease, moisture, curing compound, loose or unsound layers or any other material that would interfere with proper bonding of the marker to the pavement or the lens to the marker. Use methods approved by the Engineer for this preparation.

### (C) Removal of Existing Pavement Markers

Remove existing pavement markers before overlaying an existing roadway with pavement. Repair the pavement by filling holes as directed. When traffic patterns are changed, remove pavement markers that conflict with the new traffic pattern before switching traffic to the new traffic pattern.

Properly dispose of the removed pavement markers. No direct payment will be made for removal of existing pavement markers or repair of pavement, as such work will be incidental to other items in the contract.

### (D) Installation

#### (1) General

Install all pavement markers and adhesives per manufacturer's specifications.

#### (2) Color

Ensure that the color of the reflector corresponds to the pavement marking that the marker supplements. Red reflectors may be required in combination with crystal or yellow reflectors to indicate wrong way movement when viewed in the direction opposing the flow of traffic.

#### (3) Appearance

Remove any adhesive from the reflective lens of the marker; otherwise, replace the reflector lenses of a snowplowable pavement marker or the entire raised pavement marker.

#### (4) Spacing

Space pavement markers as shown in the plans. Position pavement marker lenses perpendicular to the flow of traffic as shown in the *Roadway Standard Drawings*. Adjust marker longitudinal spacing up to 1 foot in either direction and/or adjust marker lateral spacing up to 3" to avoid installation of the marker at a pavement construction joint or surface defect. If a marker can not be relocated as described above, do not install the affected marker.

**(E) Pavement Marker Installer Qualifications**

Ensure at least one member of every pavement marker crew is certified through the NCDOT Pavement Marking Technician Certification Process. Keep the certification current throughout the life of the project. A certified crewmember shall be present anytime this work is being performed. The certified crewmember is not required to be the same person throughout the life of the contract.

**SECTION 1251****RAISED PAVEMENT MARKERS****1251-1 DESCRIPTION**

Furnish, install, maintain and remove temporary and permanent raised pavement markers in accordance with the contract.

**1251-2 MATERIALS**

Refer to Division 10.

<b>Item</b>	<b>Section</b>
Temporary Raised Pavement Markers	1086-1
Permanent Raised Pavement Markers	1086-2

Use pavement markers that are on the NCDOT Approved Products List.

**1251-3 CONSTRUCTION METHODS**

Install temporary raised pavement markers on the nonfinal pavement surfaces with epoxy, pressure sensitive adhesives or hot bitumen adhesives.

Install permanent raised pavement markers using a hot bitumen adhesive in accordance with Article 1081-7.

On final pavement surfaces, install temporary raised pavement markers using a pressure sensitive adhesive or hot bitumen adhesive. When using a pressure sensitive adhesive, install a primer/sealer when required by the manufacturer's specifications.

**1251-4 MAINTENANCE**

Maintain all installed temporary raised pavement markers. Replace all damaged or missing temporary raised pavement markers if any of the following occurs:

(A) Three segment failures occur in any roadway section. Three consecutive damaged or missing markers in any group of 7 represents a segment failure.

(B) Twenty percent of the markers in any roadway section are damaged or missing.

(C) Engineer determines replacement is necessary.

Maintain all installed permanent raised pavement markers until final acceptance of the project.

**1251-5 MEASUREMENT AND PAYMENT**

*Temporary Raised Pavement Markers* will be measured and paid as the actual number of temporary raised pavement markers satisfactorily placed and accepted by the Engineer.

*Permanent Raised Pavement Markers* will be measured and paid as the actual number of permanent raised pavement markers satisfactorily placed and accepted by the Engineer.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Raised Pavement Markers	Each
Permanent Raised Pavement Markers	Each